

Amendments to the Claims

1. (previously presented) A method comprising:

(i) applying a photopatternable silicone composition to a surface of a substrate to form a film, where the photopatternable silicone composition comprises

(A) an organopolysiloxane containing an average of at least two silicon-bonded alkenyl groups per molecule,

(B) an organosilicon compound containing an average of at least two silicon-bonded hydrogen atoms per molecule in a concentration sufficient to cure the composition, and

(C) a catalytic amount of a photoactivated hydrosilylation catalyst;

(ii) exposing a portion of the film to radiation to produce a partially exposed film having non-exposed regions covering at least a portion of the surface and exposed regions covering the remainder of the surface;

(iii) heating the partially exposed film for an amount of time such that the exposed regions are substantially insoluble in a developing solvent and the non-exposed regions are soluble in the developing solvent;

(iv) removing the non-exposed regions of the heated film with the developing solvent to form a patterned film;

(v) heating the patterned film; and

(vi) removing all or a portion of the product of step (v) using an etching solution.

2. (previously presented) A method comprising:

(i) applying a photopatternable silicone composition to a surface of a substrate to form a film, where the photopatternable silicone composition comprises

(A) an organopolysiloxane containing an average of at least two silicon-bonded alkenyl groups per molecule,

(B) an organosilicon compound containing an average of at least two silicon-bonded hydrogen atoms per molecule in a concentration sufficient to cure the composition, and

(C) a catalytic amount of a photoactivated hydrosilylation catalyst;

(ii) exposing a portion of the film to radiation to produce a partially exposed film having non-exposed regions covering at least a portion of the surface and exposed regions covering the remainder of the surface;

(iii) heating the partially exposed film for an amount of time such that the exposed regions are substantially insoluble in a developing solvent and the non-exposed regions are soluble in the developing solvent;

(iv) removing the non-exposed regions of the heated film with the developing solvent to form a patterned film;

(v) removing all or a portion of the patterned film using an etching solution.

3. (currently amended) The method of claim 1, where the substrate is an active surface of a semiconductor wafer.

4. (currently amended) The method of claim 1, where the removing step is carried out using an etching solution comprising an organic solvent and a base.

5. (original) The method of claim 4, where the etching solution contains no more than 25% water based on the weight of the etching solution.

6. (original) The method of claim 4, where the organic solvent is selected from a monohydric alcohol, a dihydric alcohol, a monoether, a diether, a polar aprotic solvent, and combinations thereof.

7. (original) The method of claim 4, where the base is selected from ammonium hydroxide, cesium hydroxide, potassium hydroxide, sodium hydroxide, and combinations thereof.

8. (original) The method of claim 4, where the base is selected from phosphazene, tetraalkyl ammonium hydroxides, and combinations thereof.

9. (currently amended) The method of claim 1, where the solvent is a monohydric alcohol selected from the group consisting of methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol, tert-butanol, and combinations thereof.
10. (currently amended) Use of the method of claim 1 for rework, photoresist, or cleaning applications.
11. (new) The method of claim 2, where the substrate is an active surface of a semiconductor wafer.
12. (new) The method of claim 2, where the removing step is carried out using an etching solution comprising an organic solvent and a base.
13. (new) The method of claim 12, where the etching solution contains no more than 25% water based on the weight of the etching solution.
14. (new) The method of claim 12, where the organic solvent is selected from a monohydric alcohol, a dihydric alcohol, a monoether, a diether, a polar aprotic solvent, and combinations thereof.
15. (new) The method of claim 12, where the base is selected from ammonium hydroxide, cesium hydroxide, potassium hydroxide, sodium hydroxide, and combinations thereof.
16. (new) The method of claim 12, where the base is selected from phosphazene, tetraalkyl ammonium hydroxides, and combinations thereof.
17. (new) The method of claim 2, where the solvent is a monohydric alcohol selected from the group consisting of methanol, ethanol, n-propanol, isopropanol, n-butanol, isobutanol, tert-butanol, and combinations thereof.

18. (new) Use of the method of claim 2 for rework, photoresist, or cleaning applications.